

REMARKS

Favorable reconsideration of this application is respectfully requested in view of the following remarks.

Claim 3 is amended to address the minor point noted at the top of page two of the Official Action. Accordingly, withdrawal of the claim rejection under 35 U.S.C. § 112, second paragraph is respectfully requested.

Minor other amendments have also been incorporated into independent Claim 1 to ensure appropriate antecedent basis. The claim amendments presented here do not narrow the claim scope.

The subject matter of this application pertains to a method for producing a laminated material in a web-form used for packaging containers comprised of at least a support layer and a heat-sealable inner layer. As set forth in Claim 1, the method comprises drawing out a support layer in web-form from a roll, transferring a silver-based thin film layer vapor-deposited on a substrate on the inner face of the inside of the support layer including a zone to be heat-sealed by high frequency induction heating to form a container. Prior to or after the transfer of the silver-based thin film layer, a heat-sealable inner layer is laminated on the inside of the support layer. A design is printed on the outside of the support layer directly or indirectly, and one or more thermoplastic layers of the same or different types are formed at the same time or sequentially on the outside and the inside of the printed support layer.

As discussed in the present application, during fabrication of packaging containers from laminated materials in web form, the heat-sealable innermost layer is melted to form a zone that is to be sealed. However, liquid foodstuffs to be filled

and packaged in the container might be left on the sealing zone and in the vicinity of the sealing zone. The residue is likely to be polluted by bacteria or the like. Thus, as pointed out in the present application, the sealing zone, and perhaps also the vicinity of the sealing zone, should be formed to have an antibacterial atmosphere or formed with an antibacterial material.

In the method at issue here, a silver-based thin film layer vapor-deposited on a substrate is transferred on the inner face of the inside of the support layer including the zone to be heat-sealed by high frequency induction heating. This method allows the sealing zone, and possibly also the vicinity of the sealing zone, to be formed so as to have an antibacterial atmosphere or formed with an antibacterial material.

The Official Action sets forth a rejection of independent Claim 1, and dependent Claims 2-4, based on the disclosures in five different references – Japanese Application Publication No. 02-180105 to Ueda, U.S. Patent No. 4,264,668 to Balla, U.S. Patent No. 5,478,643 to Peiffer et al, U.S. Patent No. 4,501,808 to Sakai et al and International Application Publication No. 02/021220 to Rosenberger et al. That rejection is respectfully traversed.

Ueda discloses a packaging machine that positions an aluminum foil tape at a position on a moving web that is to be heat sealed by way of a high frequency coil. As the Official Action correctly notes, *Ueda* does not disclose transferring a silver-based thin film layer vapor-deposited on a substrate on the inner face of the inside of a support layer of a laminated material used for packaging containers.

Balla discloses a sealable laminated material that includes a carrier layer 1, a layer 2 of carbon black applied by a printing press on the carrier layer 1, and a sealing layer 3 of thermoplastic material on top of the carbon black layer 2.

Peiffer et al discloses a matte multilayer polypropylene film. The background portion of *Peiffer* describes producing a paper/metal composite material in which a metal layer is transferred onto the paper from a polypropylene film which has been vapor-deposited with metal.

Sakai et al discloses an organic film used as either a photosensitive film in electrophotographic printing systems in which a semiconductor laser is used as a light source or an optical disk recording layer where information is to be written in and reproduced from by means of semiconductor laser beams.

Finally, *Rosenberger et al* discloses a packing material that includes a monofilm or a film composite provided with a single-or double-sided print motif.

The rejection of the claimed method at issue here is respectfully traversed because the Official Action does not establish a *prima facie* case of obviousness. The Official Action concludes that it would have been obvious to transfer a silver-based thin film layer vapor-deposited on a substrate onto the inner face of the inside of the support layer disclosed in *Ueda* in light of the disclosure in *Sakai et al*. However, the disclosure in *Sakai et al* has no relevance to the fabrication of laminated material used in the production of packaging containers, and so one of ordinary skill in the art would have no reason to combine the disclosures in *Ueda* and *Sakai et al* in the manner recited in Claim 1.

Sakai et al's disclosure focuses on a laser-responsive film specifically used in electrophotographic printing systems or for optical disks. Electrophotographic printing system utilize a semiconductor laser as a light source to record desired image information on a photosensitive member for later reproduction. This is accomplished by modulating the laser with electric signals in response to the image

information, and scanning the surface of the photosensitive member with the modulated laser beam to form an electrostatic latent image on the photosensitive member which is later developed utilizing a toner. *Sakai et al* goes on to describe various types of known laser-responsive organic films used for the photosensitive member in electrophotographic printing systems.

In the case of optical disks, the laser-responsive recording film is designed to store high density information in the form of spiral or circular tracks of optically detectable minute pits. The disk includes a laser-responsive layer, and information is written on the disk by scanning the surface of the laser-responsive layer with a converged laser beam, modulated according to the information, to form the minute pits. The laser-responsive layer forms optically detectable pits by absorbing laser energy.

Sakai et al points out that known laser-responsive organic films used in optical disks and electrophotographic printing systems are not satisfactory because the stability of organic compounds becomes worse as the wavelength of light used increases. That is, known laser-responsive organic films capable of absorbing long wavelength rays are susceptible to decomposition with a slight temperature rise. *Sakai et al* thus proposes an organic film for optical disks and electrophotographic printing systems that addresses such shortcomings. Beginning in line 25 of column 25, *Sakai et al* describes that the disclosed organic film can be used as the charge generation layer of an electro-photographic photosensitive member having two photosensitive layers functioning separately as a charge generation layer and a charge transport layer. In the discussion beginning in line 51 of column 27, *Sakai et al* further states that the photosensitive laminate comprising the charge generation

layer and the charge transport layer is formed on a substrate. Suitable substrate materials mentioned by *Sakai et al* for this purpose include silver particles.

This disclosure in *Sakai et al* of utilizing silver particles to form a substrate supporting photosensitive layers of an electro-photographic photosensitive member would not have led one of ordinary skill in the art to modify *Ueda's* method of fabricating packaging laminated material for packaging containers to include transferring a silver-based thin film layer vapor-deposited on a substrate on the inner face of the inside of the web including a zone to be heat sealed by high frequency induction heating. *Sakai et al* describes the use of silver particles in the context of fabricating an electro-photographic photosensitive member used in electrophotographic printing systems. This disclosure has no applicability to methods for fabricating packaging laminated material for packaging containers such as described in *Ueda*. *Sakai et al* lacks disclosure of transferring a silver-based thin film layer, vapor-deposited on a substrate, on the inner face of a support layer including a zone to be heat-sealed by high frequency induction heating for the formation of a container. Indeed, nowhere does *Sakai et al* mention fabricating packaging laminated material used in the fabrication of packaging containers. Considering at least these points, there exists no reason why one of ordinary skill in the art would combine *Ueda* and *Sakai et al*, as well as the other three references, in the manner recited in Claim 1.

The Official Action comments that it would have been obvious to utilize the disclosure in *Sakai et al* as an alternative to the use of aluminum foil because aluminum foil is expensive. This rationale is apparently based on the statement in lines 45-47 of column 1 of *Balla* mentioning that an aluminum foil layer can be

expensive. However, *Balla* proposes a solution to this expense issue in that *Balla* describes the use of a layer 2 of carbon black material. Thus, to the extent an ordinarily skilled artisan agreed with *Balla*'s observation about the expense associated with using aluminum foil, such person would have no reason to look to the disclosure in *Sakai et al* because *Balla* proposes a solution to such problem, namely the use of carbon black. However, using carbon black as described in *Balla* is not what is recited in Claim 1 at issue here.

For at least the reasons set forth above, it is respectfully submitted that there exists no reason why a person of ordinary skill in the art would have combined *Ueda* and *Balla*, and the other three references relied upon in the Official Action, to result in a method as recited in independent Claim 1. Accordingly, withdrawal of the rejection of record is respectfully requested.

The dependent claims define further distinguishing aspects of the claimed method. However, as these dependent claims are allowable at least by virtue of their dependence from allowable independent claims, a detailed discussion of the additional distinguishing aspects of the claimed method set forth in the dependent claims is not set forth at this time.

Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful

in resolving any remaining issues pertaining to this application the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

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